

REMARKS

I. Introduction

Claims 1, 2 and 4-12 are now pending in the present application after introduction of claim 12. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are in allowable condition.

II. Objections to Drawings & Claims

The Examiner objected to the drawings because Figure 2 contains informalities (as indicated in the "Notice of Draftsperson's Patent Drawing Review"). In response, Figure 2 has been amended to render the numbers, lines and reference characters have been rendered plain, legible, well defined, clean and uniformly thick. An attached replacement drawing sheet is provided.

III. Rejection of Claims 1 to 11 under § 102(b)

Claims 1, 2 and 4 to 11 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,330,870 ("Inoue"). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

To anticipate a claim under § 102(b), a single prior art reference must identically disclose each and every claim element, ***arranged exactly as in the claim***. See Lindeman Maschinenfabrik v. American Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984). If any claimed element is absent from a prior art reference, it cannot anticipate the claim. See Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997). Additionally, not only must each of the claim limitations be identically disclosed, an ***anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention***, namely the inventions of the rejected claims, as discussed above. See Akzo, N.V. v. U.S.I.T.C., 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Independent claim 1 recites, in relevant parts, a method for controlling a camshaft control device, . . . “the camshaft control device including a locking position, the method comprising: determining whether there is an adaptation of the camshaft to the crankshaft so that the phase angle of the camshaft with respect to the crankshaft may be determined; . . . wherein, **when there is no release command and the adaptation has not occurred**, the camshaft control device is activated so that **the camshaft control device assumes a predefinable reference position.**” Independent claims 8 and 10 recite substantially similar features. As an example, amended claim 1 encompasses a method in which, when no adaptation of the camshaft to the crankshaft has occurred and the locking position is already released or not locked (e.g., due to improper shut down of the engine), the camshaft control device will move the camshaft into a predefinable reference position.

In support of the rejection, the Examiner contends that column 22, lines 4-25 of Inoue teaches that “when adaptation has not occurred or it is judged that the valve timing adjustor operation is poor, operating the valve timing adjustor 18 to the predetermined reference locked position,” and therefore this cited section of Inoue teaches the claimed feature that **“when there is no release command and the adaptation has not occurred, the camshaft control device is activated so that the camshaft control device assumes a predefinable reference position.”** In addition, in the “Response to Arguments” section of the Office Action, the Examiner further notes that column 22, lines 4-25 of Inoue teach “[t]he claims as written, interpreted in the broadest possible scope.” However, there is no possible reasonable interpretation of present claim 1 and the teachings of Inoue that would support the Examiner’s anticipation conclusion, primarily because the cited section of Inoue, i.e., column 22, lines 4-25, does not even mention the claimed precondition for activating the camshaft control device, i.e., the cited section simply does not teach or suggest that “the camshaft control device is activated so that the camshaft control device assumes a predefinable reference position” **when there is no release command and the adaptation has not occurred**, as recited in present claim 1. In fact, the cited section of Inoue merely discusses the different actions which take place depending on whether the variable valve timing adjustor 18 is “sufficient” or “poor.” Applicants will address the cited section of Inoue in further detail below.

The section (col. 22, l. 4-25) of Inoue cited by the Examiner relates to the lock failure prevention control according to Figure 21, the effect of which is illustrated in Figure

22. In the section immediately preceding the cited section, i.e., in column 21, lines 58 ff., Inoue points out that when variable valve timing adjuster 18 [Inoue incorrectly uses reference numeral 19 in col. 21, line 58] is slightly movable, the lock position may not be able to be reached when the internal combustion engine is shut off. Therefore, step 3101 (column 22, lines 3 ff.) provides for the movability to be ascertained on the basis of a temperature. If the temperature is outside of a predefined range, the movability is judged to be small (column 22, 14-18) and the setpoint camshaft phase is adjusted to be near the lock position. This action allows the arrangement of Inoue to reliably reach the lock position upon shutting off the internal combustion engine, even when the movability of variable valve timing adjuster 18 is low.

As can be gathered from column 22, lines 31 ff. and Figure 22 of Inoue, the setpoint camshaft phase is corrected as a function of the present operating conditions. Of course, such correction may only be accomplished when the camshaft phase has already been adapted and the camshaft is disengaged. If the coolant temperature leaves the permissible temperature range according to step 3101, there is a risk that the lock position can no longer be reliably attained upon shutting off the internal combustion engine, and the lock failure prevention control brings the setpoint camshaft phase near the lock position, as described in Inoue.

In contrast to the teachings of Inoue, Applicants' present claimed invention provides for the camshaft adjusting device to be brought to a reference position, **when there is neither a disengagement command nor adaptation** (i.e., "**when there is no release command and the adaptation has not occurred**"). However, in the case of the arrangement described in Inoue, disengagement and adaptation must have already occurred; otherwise, the adjustment of the actual value to the setpoint value shown in Fig. 22 would not be possible.

Generally, Inoue relates to how the camshaft can be reliably brought into a lock position when the internal combustion engine is shut off, which is fundamentally different from Applicants' claimed invention, which relates to bringing the camshafts into a reference position when there is no adaptation and no disengagement, which reference position ensures optimum operation of the internal combustion engine during idle.

For at least the foregoing reasons, independent claims 1, 8 and 10, as well as their dependent claims 2, 4-7, 9 and 11, are allowable over Inoue. Withdrawal of the anticipation rejection of pending claims 1, 2 and 4-11 is respectfully requested.

New claim 12 depends from claim 1, so claim 12 also allowable over Inoue. Independent of the above, claim 12 recites that "the reference position is selected in such a way that an idling operation of the internal combustion engine is enabled." Inoue clearly does not disclose such an action. For example, in column 11, lines 11-12, Inoue only discloses that the "lock position" is suitable for starting. Inoue does not disclose an additional reference position that renders idling operation possible.

CONCLUSION

In view of the above remarks, it is respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

KENYON & KENYON

 (R. No. 36,197)

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By: JONG LEE for Gerard Messina
Gerard A. Messina
Reg. No. 35,952
One Broadway
New York, NY 10004
(212) 425-7200

CUSTOMER NO. 26646
PATENT & TRADEMARK OFFICE

Amendments to the Drawings:

The attached sheet of drawing includes changes to Figure 2. This sheet, which includes Fig. 2, replaces the original sheet including Fig. 2. In Fig. 2, numbers, lines and reference characters have been rendered plain, legible, well defined, clean and uniformly thick, in compliance with comments contained in the “Notice of Draftsperson’s Patent Drawing Review” dated 5/17/05.

Attachment: 1 replacement sheet